Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for operating a network connecting a plurality of processor cells that are already configured in a multiprocessor system with a plurality of links, comprising:

recognizing by software operating on at least one processor cell when a network operation can use a link of said plurality of links to implement a network operation, wherein said plurality of links comprises shared memory links for transmitting memory requests and memory responses between the processor cells, and wherein the link connects a high bandwidth integrated circuit of the one processor cell with another high bandwidth integrated circuit of another processor cell; and

utilizing said link of said plurality of links to perform said network operation, wherein utilizing said link further comprises avoiding the use of a network connection in the network, wherein said shared memory links provide higher bandwidth than the network connection.

Claim 2 (Original): The method of claim 1, wherein said multiprocessor system is a symmetric multiprocessor system.

Claim 3 (Original): The method of claim 1, wherein said software is an operating system.

Claim 4 (Original): The method of claim 1, wherein said network is an Ethernet local area network.

Claim 5 (Original): The method of claim 1, wherein said multiprocessor system includes at least two processor cells interconnected in a configuration chosen from a group of configurations consisting of: a fully interconnected configuration, a cross-bar configuration, a mesh configuration, or a ring configuration.

Claim 6 (Original): The method of claim 5, wherein said step of recognizing comprises:

determining whether said link provides sufficient bandwidth to complete said network operation.

Claim 7 (Original): The method of claim 5, wherein said step of recognizing comprises:

choosing a second link from said plurality of links when a first link of said plurality of links does not provide sufficient bandwidth to perform said network operation.

Claim 8 (Original): The method of claim 1, wherein said step of utilizing comprises:

suspending said network operation when said link of said plurality of links is not providing sufficient bandwidth to perform said network operation; and

resuming said network operation when said link of said plurality of links provides sufficient bandwidth to perform said network operation.

Claim 9 (Original): The method of claim 1, further comprising:

suspending said network operation when said link of said plurality of links is not providing sufficient bandwidth to perform said network operation; and

performing said network operation on a second link of said plurality of links when said link is not providing sufficient bandwidth to perform said network operation.

Claim 10 (currently amended): A method for operating a network connecting a plurality of processor cells that are already configured in a multiprocessor system with a plurality of links, comprising:

installing software on at least one processor cell of said plurality of processor cells, wherein said software is aware of said plurality of links between said plurality of processor cells, wherein said plurality of links comprises shared memory links for transmitting memory requests and memory responses between the processor cells, and wherein the link connects a high bandwidth integrated circuit of the one processor cell with another high bandwidth integrated circuit of another processor cell;

recognizing by said software when a network operation can use a link of said plurality of links to implement a network operation; and

utilizing said link of said plurality of links to perform said network operation, wherein utilizing said link further comprises avoiding the use of a network connection

in the network, wherein said shared memory links provide
higher bandwidth than the network connection.

Claim 11 (Original): The method of claim 10, wherein said
multiprocessor system is a symmetric multiprocessor system.

Claim 12 (Original): The method of claim 10, wherein said
software is an operating system.

Claim 13 (Original): The method of claim 10, wherein said
network is an Ethernet local area network (LAN).

Claim 14 (Original): The method of claim 10, wherein said
multiprocessor system includes at least two processor cells
interconnected in a configuration chosen from a group of
configurations consisting of: a fully interconnected
configuration, a cross-bar configuration, a mesh
configuration, or a ring configuration.

Claim 15 (Original): The method of claim 14, wherein said
step of recognizing comprises:
        determining whether said link provides sufficient
bandwidth to perform said network operation.

Claim 16 (Original): The method of claim 14, wherein said
step of recognizing comprises:
        choosing a second link from said plurality of links
when a first link of said plurality of links does not
provide sufficient bandwidth to perform said network
operation.

Claim 17 (Original):   The method of claim 10, wherein said
step of utilizing comprises:

suspending said network operation when said link of
said plurality of links is not providing sufficient
bandwidth; and

resuming said network operation when said link of said
plurality of links provides sufficient bandwidth to perform
said network operation.

Claim 18 (Original):   The method of claim 10, further
comprising:

suspending said network operation when said link of
said plurality of links is not providing sufficient
bandwidth; and

performing said network operation on a second link of
said plurality of links when said link is not providing
sufficient bandwidth to perform said network operation.

Claim 19 (currently amended):   A network to perform a
plurality of network operations, implemented on a
multiprocessor system including a plurality of links to
connect a plurality of processor cells, said network
comprising:

a first module to recognize when a link of said
plurality of links provides sufficient bandwidth to perform
a network operation of said plurality of network
operations, wherein said plurality of links comprises
shared memory links for transmitting memory requests and
memory responses between the processor cells, and wherein

the link connects a high bandwidth integrated circuit of
the one processor cell with another high bandwidth
integrated circuit of another processor cell; and

a second module to utilize said link to perform said
network operation of said plurality of network operations,
wherein the second module is configured to avoid the use of
a network connection in the network by utilizing said link
to perform said network operation, wherein said shared
memory links provide higher bandwidth than the network
connection.

Claim 20 (Original): The network of claim 19, wherein said
multiprocessor system is a symmetric multiprocessor system.

Claim 21 (Original): The network of claim 19, wherein said
network is an Ethernet LAN.

Claim 22 (Original): The network of claim 19, wherein said
first module and said second module are implemented in an
operating system.

Claim 23 (Original): The network of claim 22, wherein said
operating system is installed on at least one processor
cell of said plurality of processor cells.

Claim 24 (Original): The network of claim 19, wherein said
multiprocessor system includes at least two processor cells
interconnected in a configuration chosen from a group of
configurations consisting of: a fully interconnected

configuration, a cross-bar configuration, a mesh
configuration, or a ring configuration.

Claim 25 (Original): The network of claim 19, wherein said
first module comprises:

software to determine whether said link provides
sufficient bandwidth to perform said network operation.

Claim 26 (Original): The network of claim 19, wherein said
first module comprises:

software to choose from a second link from said
plurality of links when a first link of said plurality of
links does not provide sufficient bandwidth to perform said
network operation.

Claim 27 (Original): The network of claim 19, wherein said
second module comprises:

software to suspend said network operation when said
link of said plurality of links is not providing sufficient
bandwidth; and

software to resume said network operation when said
link of said plurality of link provides sufficient
bandwidth to perform said network operation.

Claim 28 (Original): The network of claim 19, wherein said
second module comprises:

software to suspend said network operation when said
link of said plurality of links is not providing sufficient
bandwidth; and

software to perform said network operation on a second link of said plurality of links when said link is not providing sufficient bandwidth to perform said network operation.

Claim 29 (cancelled)

Claim 30 (cancelled)

Claim 31 (previously presented): The method of claim 1, wherein the high bandwidth integrated circuit and the another high bandwidth integrated circuit each comprises an application specific integrated circuit.

Claim 32 (cancelled)

Claim 33 (cancelled)

Claim 34 (currently amended): The method of claim ~~1,0~~ 10 wherein the high bandwidth integrated circuit and the another high bandwidth integrated circuit each comprises an application specific integrated circuit.

Claim 35 (cancelled)

Claim 36 (cancelled)

Claim 37 (previously presented): The network of claim 19, wherein the high bandwidth integrated circuit and the